STRUCTURE AND ECONOMIC CONTRIBUTION

of the

HORSE INDUSTRY

in

BRITISH COLUMBIA

Province of British Columbia
Ministry of Agriculture, Fisheries and Food
Hon. Larry Chalmers, Minister

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Mark Robbins/Betsy Terpsma

Horse Industry Program
B.C. Ministry of Agriculture, Fisheries and Food

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Major Findings

- 75,000 horses
- 30,000 owners
- 14,500 households

- $ 250 million in direct expenditures annually
- $ 446 million in total economic contribution to the province annually
- $ 20 million in direct provincial government tax revenues annually

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- over 5,000 full time equivalent jobs

- $ 675 million capital investment in horses, buildings and equipment (excluding land)
- 11,000 horse farms
- using 360,000 acres
- only type of livestock farm showing growth during the last census period
- most common livestock farm in areas surrounding urban centres

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- future growth limited by availability of facilities for the sport and race sector and access to safe riding areas for the recreational sector

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I. Introduction

Industry respresentatives and policy makers have suffered from a lack of information in their efforts to assist in the growth and development of the horse industry. Some small local surveys and more general national surveys have not provided sufficient information on the structure, economic contribution, employment, farm component and regional differences of the horse industry in B. C.

The horse industry program of the Ministry of Agriculture, Fisheries and Food undertook a comprehensive survey in the spring of 1990 in order to provide more accurate information on the industry, and establish a data base for future reference.

The purpose of the survey was fivefold:

1) to obtain accurate information on the size, structure and economic contribution of the horse industry in B.C.
2) to determine the nature of the farming component of the horse industry.
3) to develop a demographic profile of the people involved in the industry.
4) to identify the key factors limiting growth in the industry.
5) to establish a data base that would provide the ability to analyze the industry in more detail by activity and geographic region.

The differing conclusions of other studies on the horse industry result, in part, from the assumption that all horse owners are the same. This study identifies four distinct sectors of the industry: race, sport, recreation and work. Each sector was surveyed and analysed separately, then combined to provide the overall picture. In addition, responses were coded by forward sorting area (FSA), the first three digits of the postal code, to enable the data to be analyzed on a regional basis.

The survey confirms what the industry has been saying: horses are big business in B.C. Some 30,000 owners use 360,000 acres of land and spend $ 250 million annually in direct operating expenses to support 75,000 horses and over 5,000 full time jobs. This activity generates $ 20 million in direct provincial tax revenues.

How does this compare to other agriculture activities? In agriculture the measure of economic activity is `farm gate receipts'. Operating expenditures in the horse industry are a conservative estimate of `farm gate receipts'. This being the case the horse industry, with over $ 250 million in operating expenditures annually, is second only to the dairy industry in size and with 5,000 full time equivalent jobs is the most labour intensive livestock sector.

In the past, businessmen and policy makers have not had good demographic information to use in basing their decisions on the horse industry. Section II provides details on the type of people that make up the industry.

In the last census, farms reporting horses were the second most common livestock farm behind cattle, and were the only type of livestock farm to show an increase over the previous census. Horse farms have also been identified as a viable use of small farm holdings near urban centres. Section V describes some characteristics of horse farm properties; in general and in the specific regions.

The key limitations to growth, identified by horse owners, are inadequate facilities and lack of access to safe riding trails. More specific needs of different sectors and regions are outlined in Section VI of the report.

The goal of this report is to present a general overview of the structure and economic contribution of the industry. It reads like a reference manual and it is hoped that in the future it will be used in that way.

The number and variety of reports that can be developed from the survey information is endless. Examples of the types of sector and regional profiles that can be developed from the data are included in Section VII of the report. Individuals wishing more detailed information can contact the Ministry's Horse Industry Program.

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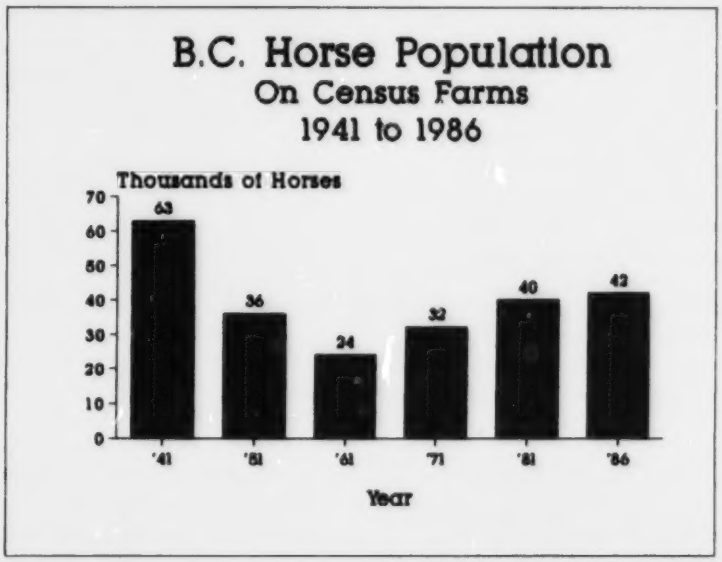
II. Industry Structure

Horses

Since 1962 the population of horses in B. C. has been rising. In fact farms reporting horses were the only type of livestock farms that increased over the last census period.



Estimates of the number of horses in B.C. have ranged from around 50,000 to well over 100,000. This variation is due to the methods and assumptions used in the estimates. (See appendix for more details on methodology). This survey estimates the horse population in B.C. at just over 75,000. This would give B.C. the third largest horse population in Canada after Alberta with approximately 200,000 and Ontario with 130,000.*

* based on estimates from 1986 Census of Agriculture

Table 1
Estimate of the Number of Horses in B.C.

Sector	Horses/household x	Households	Total
Race	6.7	1956	13,105
Sport	5.8	2334	13,537
Recreational	4.9	7114	34,858
Work	4.7	3175	14,922
		14,579	**76,422**

The census data and the survey responses provide a basis for the following estimate on how these horses are distributed throughout the province.

Table 2
Regional Distribution of Horses in B.C.

Area of province	Number of horses
Cariboo	8,000
Vancouver Island	6,000
Kootneys	3,500
Lower Mainland	20,000
Okanagan	16,000
Omineca	6,000
Peace	10,000
Thompson	5,500
Total	**75,000**

Horse Owners

(Demographics)

Through its historical importance and treatment in the media, the horse has often been associated with wealth and status. The survey does not support this view. While the costs associated with keeping a horse would naturally eliminate some lower income households, the profile of the horse owner is not very different from the average British Columbian.

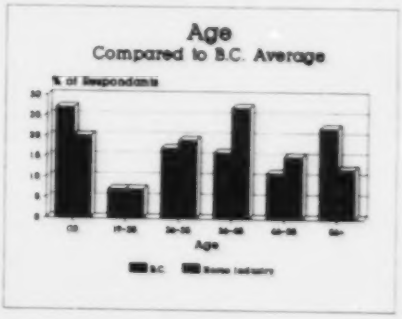
The typical horse owner in B.C. is a professional (33%), female(61%), between 36 and 45 years old(27%), with formal post secondary training and a household income of between $30,000 and $60,000(48%). Of the 72% that drink alcoholic beverages, most prefer wine. Country music(33%) is the music of choice while 25% smoke cigarettes.

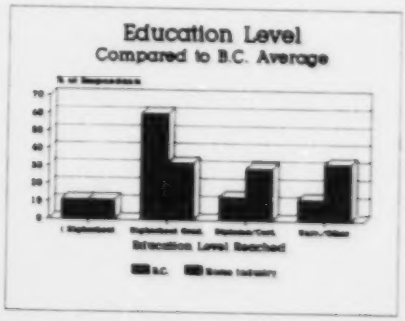
In comparison to the general population, horse owners have more post secondary training, work more as professionals and have slightly higher household incomes. There is a larger presence of 35 - 45 year olds in the horse industry than the general population.

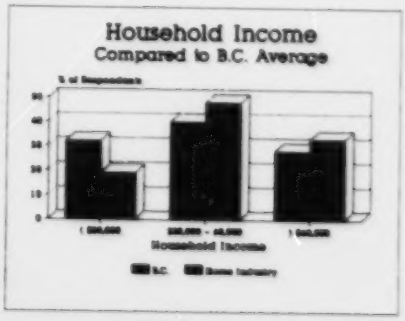
We can characterize the people in the horse industry as well educated, middle aged, middle income and more often female.

The survey responses discount the view that horse owners are typically wealthy. Almost half the households reporting had an income between $30,000 and $60,000, very close to the provincial median of $ 45,000. The percentage of owners with incomes over $60,000 was only slightly higher than the provincial average.

Across the four major sectors the characteristic that stood out the most was the high level of university graduates in the industry. Over twice as many horse people have university degrees as the general population.







A review of the special characteristics of the four major sectors follows. The demographic information is summarized on Table 3.

Table 3

Summary of Demographic Information

	General Public	Industry Total	Racing Sector	Sport Sector*	Recreation Sector
Responses		1530	326	411(310)	737
Household make-up					
Average # people		2.2	2.9	2.0 (2.0)	2.1
% male	49%	39%	54%	35% (29%)	36%
% female	51%	61%	46%	65% (71%)	64%
Age					
< 18	27%	20%	7%	20% (21%)	18%
19 - 25	7%	7%	7%	10% (11%)	7%
26 - 35	17%	19%	17%	21% (25%)	20%
36 - 45	16%	27%	23%	27% (30%)	32%
46 - 55	11%	15%	25%	14% (9%)	14%
55 +	22%	12%	21%	8% (4%)	9%
Education**					
< H.S. diploma	11%	11%	14%	12% (5%)	10%
H.S. diploma	60%	32%	36%	32% (27%)	30%
P.S. diploma	13%	29%	24%	28% (31%)	33%
Univ. degree	12%	24%	24%	23% (29%)	23%
other	4%	4%	2%	5% (8%)	4%
Occupation					
professional		33%	36%	30% (33%)	30%
labour/clerical		15%	12%	18% (18%)	18%
technical		10%	10%	10% (11%)	11%
farmer/prof horseman		16%	18%	14% (15%)	13%
homemaker/student		17%	15%	14% (14%)	19%
other		9%	9%	14% (9%)	9%
Household income					
< $30,000	32%	19%	10%	17% (17%)	20%
$30 - $60,000	40%	48%	40%	47% (42%)	52%
> $60,000	28%	33%	50%	36% (41%)	28%
Personal preference					
Music					
hard rock		4%	3%	5% (7%)	4%
soft rock		25%	21%	29% (35%)	25%
country		33%	32%	35% (21%)	34%
oldies		19%	24%	16% (16%)	17%
classical		15%	15%	12% (16%)	16%
other		4%	5%	3% (5%)	4%
Drinks					
spirits		17%	21%	17% (12%)	16%
wine		27%	29%	25% (30%)	26%
beer/cider		26%	24%	29% (30%)	26%
don't drink		28%	23%	26% (25%)	30%
other		2%	3%	3% (3%)	2%
Smokers	20%	25%	29%	24% (21%)	24%

Notes to Table 3

* The sport sector includes all horse people that compete for prize money at least three times a year. The numbers in brackets are for people involved in the Olympic disciplines.

** H.S. and P.S. stand for high school and post secondary education.

\- The work sector was not included as there were too few responses.

\- General population numbers are from Statistics Canada.

Sector Differences

Some sector differences are evident after studying the demographics of people involved in the horse industry.

For instance in the race sector more males (54%) are involved than females(46%). This is almost the reverse of the industry average. The higher cost of maintaining race horses may explain some of this difference. Half the households involved with race horses have annual incomes over $60,000. This is much higher than the industry average of 33%. In addition to higher incomes, race horse people tend to be older with only 14% under 26 and 21% over the age of 55.

Seven out of ten people in the Olympic disciplines are female and close to two thirds are under 35. Though strongest in the Olympic disciplines, the trend to more young females is consistent throughout the sport horse sector. Surprisingly this trend is not accompanied by lower income and education levels, as might be expected. Wine and soft rock music are more popular in the Olympic disciplines than the total sport sector or the general industry.

Recreational horse owners, because of their large numbers, will tend to drive the industry average.

III. Economic Contribution to B.C.

Economic contribution (impact), as used in this report, can best be described as the total expenditures related to the existence of horses.

Expenditures are broken down into capital expenditures and operating expenditures. Capital expenditures include all purchases of equipment, buildings and horses. Land has not been included in capital expenditures as it is difficult to separate out which part of land on mixed farms is used for horses, and because the price of land varies so much around the province that any generalizations would have little value. Direct operating expenditures include all expenditures related to the ownership of horses. This includes maintaining and exhibiting horses.

Operating expenditures stimulate other expenditures. For example, when a horse owner pays a vet bill for medicine and services, the vet will use that money to make other purchases, and so on. These secondary expenditures are estimated as a proportion of the direct operational expenditures. In general the more labour intensive an industry, the higher the secondary expenditures because wages are typically spent quickly. Other studies of the horse industry (primarily the racing sector) have estimated secondary expenditures at from 1 to 1.5 times the direct operating expenditures. Considering this we estimated secondary expenditures by using a conservative multiplier of 1 for the more labour intensive racing and sport sectors and .5 and .25 for the recreational and work sectors respectively.

Table 4 is a summary of the economic contribution of the horse industry using the operating expenditures reported in the survey and the multipliers discussed above. A more detailed analysis of the racing sector is included in the appendix.

Table 4

Total Economic Contribution to the Provincial Economy

Sector	Operating Expenditures	(multiplier)	Secondary Expenditures	Economic Impact
Race (owners)	$ 68.6 m	(x 1)	$ 68.6 m	$ 137.2 m
(tracks)	$ 15.9 m	(x 1)	$ 15.9 m	$ 31.8 m
	$ 84.5 m		$ 84.5 m	$ 169.0 m
Sport	$ 69.8 m	(x 1)	$ 69.8 m	$ 139.6 m
Recreational	$ 81.2 m	(x .5)	$ 40.6 m	$ 121.8 m
Work	$ 16.4 m	(x .25)	$ 4.1 m	$ 20.5 m
Total	**$ 251.9 m**		**$ 199.0 m**	**$ 450.9 m**

Table 5 summarizes the capital investment in the horse industry.

Table 5

Capital Investment

(# of horses x average value)
(# of properties x average investment / property*)

Race sector		
Horses (13,105 x $ 8,994)		$ 117.9 m
Buildings & equipment (no land) (1086 x $70,000)		$ 76.0 m
		$ 193.9 m
Sport sector		
Horses(13,537 x $6,486)		$ 87.8 m
Buildings & equipment (no land) (1722 x $50,000)		$ 86.1 m
		$ 173.9 m
Recreational sector		
Horses (34,858 x $ 2,000*)		$ 69.7 m
Buildings & equipment (no land) (5335 x $35,000)		$ 186.7 m
		$ 256.4 m
Work sector		
Horses (14,922 x $ 1,365)		$ 20.4 m
Buildings & equipment (no land) (3175 x $10,500)		$ 33.3 m
		$ 53.7 m
Total horses	**$ 295.8 m**	
Total buildings & equipment	**$ 382.1 m**	
	$ 677.9 m	

* Investment in buildings and equipment was selected as half way between the average and median value as the average value appeared high. This will tend to underestimate the capital investment.

Operating expenditures are detailed in Table 6. The multiplier used in the estimation relates to the level of responses to the survey. For example in the race and sport sector, responses were received from 1/6 of the industry; thus the responses must be multiplied by 6 to get an estimate of the whole industry.

Table 6

Direct Operating Expenditures by Horse Owners

(respondents x average expenditures x multiplier*)
per year

Race Horse Owners

* Horses kept at home	
- expenditures on horses (1500 @ $2,159 x 6)	$ 19.4 m
- expenditures on wages(91 @ 1716 hr x $6.50/hr x6)	$ 6.1 m
- expenditures on bldg & equip (202 x $6,320 x6)	$ 7.7 m
	$ 33.2 m
* Horses boarded	
- boarding expenditures (693 @ $3,600 x 6)	$ 15.0 m
* Training expenses (Thoroughbred + Standardbred)	
- (1000 x $750 x 9 mo)+(300 x $550 x 12 mo)**	$ 8.7 m
- vet, farrier and jockey fees	$ 5.8 m
* Expenditures to attend races	
- (121 x $8,193 x 6)	$ 5.9 m
Operating Expenditures	$ 68.6 m

Sport Horse Owners

* Horses kept at home	
- expenditures on horses(1689 @ $1,774 x 6)	$ 18.0 m
- expenditures on wages(72 @ 1332 hr x $6.38/hr x6)	$ 3.7 m
- expenditures on bldg & equip(287 x $5,787 x 6)	$ 10.0
	$ 31.7 m
* Horses boarded	
- boarding expenditures (593 @ $ 3,000 x 6)	$ 10.7 m
* Training expenses	
- appendix	$ 9.7 m
* Expenditures to attend competitions	
- (411 x $7,185 x 6)	$ 17.7 m
Operating Expenditures	$ 69.8 m

Recreational Owners

* Horses kept at home	
- expenditures on horses(2710 x $ 1,442 x 9)	$ 35.2 m
- expenditures on wages(77 x 924 hr x $6.38/hr x 9)	$ 4.1 m
- expenditures on bldg & equip(550 x $3,485 x 9)	$ 17.3 m
	$ 56.6 m
* Horses boarded	
- boarding expenditure (183 x $2,352 x 9)	$ 3.9 m
* Expenditures to attend competitions	
- (409 x $ 5,620 x 9)	$ 20.7 m
Operating Expenditures	$ 81.2 m

Work Horse Owners

- expenditures on horses (3175 x 4.7 x $872)	$ 13.0 m
- expenditures on bldg & equip(3175 x $1,069)	$ 3.4 m
Operating Expenditures	$ 16.4 m
Total operating expenditures	**$236.0 m**
Operating expenditures related to maintaining horses	**$167.5 m**

Note:

* Responses to the survey only represent a portion of the industry. The multiplier is used to convert the sample to the actual industry size. For example in the sport and race sectors the respondents represented 1/6 of the industry, thus the responses must be multiplied by 6 to represent the entire industry.

** Training expense was calculated as follows:
(horses not owner trained x non-maintenance cost x period in training)

In the racing sector the maintenance cost of the horse has been taken out of the training fee. For example $750 was used as the training fee for thoroughbreds. This represents the $1,000 industry average minus $250 for maintenance of the horse.

Summary of economic contribution

The information on economic contribution and jobs in the industry is summarized in Table 7, based on 100 horses.

Training and exhibiting expenditures per/horse are higher in the sport sector than the racing sector because more of the sport horses are active at any one time and because exhibiting expenses in the sport horse sector are high.

Employment on the other hand is much higher in training race horses because fewer owners are involved in training their horses themselves. Though sport horse owners spend a lot on training and showing, they typically maintain their own horses.

Table 7

Jobs and Economic Activity in the B.C. Horse Industry

	Race	Sport	Recreational	Work
	(per 100 horses)			
Maintenance Expenditures	$368,000	$313,000	$173,600	$109,900
Training & Exhibiting Expenditures	$ 89,300	$184,600*	$ 59,300	0
Maintenance Jobs (FTE)	3.11	1.95	.905	.13
Training Jobs	13.9	1.73	0	0
	(per 100 horses)			
Expenditure Details				
- grain	$40,500	$31,100	$21,200	$12,300
- hay	$42,800	$47,300	$46,300	$38,300
- bedding	$14,500	$13,100	$11,000	$ 6,000
- vet fees	$26,700	$22,100	$16,400	$12,800
- farrier	$18,200	$26,000	$24,700	$20,200
Capital Investment/ Property**	$ 70,000	$ 50,000	$ 35,000	$10,500
Median property size(acres)	9.5	8.6	6.0	17.5
Properties Assessed Farm	98 %	58 %	45 %	88 %

* Sport horse competitors spend over $7,000 per year on clothes, tack, vehicles and lodging

** Capital investment in properties includes buildings and equipment. The median value was used, rather than the average value. This will tend to underestimate capital investment.

Direct Provincial Government Tax Revenues from the Horse Industry

The provincial government receives almost $20 m annually from direct operational expenditures by horse owners, and horse racing fans. This does not account for the tax revenues received from secondary expenditures or land taxes.

Direct operational expenditures are the moneys spent by horse owners each year to maintain and exhibit (including race) their horses. The estimate of direct provincial government tax revenues relates to the money sent directly to the government by the businesses that provided the goods and services to horse owners.

Businesses remit taxes directly for 1) sales tax on goods purchased and, 2) income tax on the wages paid to provide the good or service. For the calculation that follows, applicable tax rates were estimated as follows:

* provincial sales tax of 6% on all taxable goods

* provincial share of income taxes = 1/3

* effective income tax rate of 20% for semi-skilled jobs and 30% for professionals.

Table 8
Direct Operational Expenditures
(regrouped for tax similarity)

	Race	Sport	Recreation	Work	Total
Feed	$ 18.3 m	$ 13.6 m	$ 23.0 m	$ 12.0 m	$ 66.9 m
Tack/misc	$ 2.5 m	$ 2.9 m	$ 5.3 m	$ .5 m	$ 11.2 m
Equip main	$ 10.7 m	$ 12.1 m	$ 17.8 m	$ 2.9 m	$ 43.5 m
Wages	$ 12.0 m	$ 9.0 m	$ 5.6 m		$ 26.6 m
Training	$ 8.7 m	$ 9.7 m			$ 18.4 m
Vet/farrier	$ 10.5 m	$ 4.8 m	$ 8.8 m	$ 1.0 m	$ 25.1 m
Travel	$ 5.9 m	$ 17.7 m	$ 20.7 m		$ 44.3 m
	$ 68.6 m	$ 69.8 m	$ 81.2 m	$16.4 m	$236.0 m

Estimate of % of Expenditures Sent to Government

(% of goods taxable was estimated for the different businesses)

Feed	50% labour x 20% tax rate x 1/3 provincial	3.3 %
	no sales tax on feed	0.0 %
		3.3 %
Tack/	40% labour x 20% income tax rate x 1/3 provincial	2.6 %
Misc	80% goods taxable x 6% provincial sales tax	4.8 %
		7.4 %
Equip/	50% goods taxable x 6% provincial sales tax	3.0 %
Maint	50% labour x 30% income tax rate x 1/3 provincial	4.9 %
		7.9 %
Vet/	75% labour x 30% income tax rate x 1/3 provincial	7.4 %
Farrier	no sales tax on medicine	0.0 %
		7.4 %
Travel	50% labour x 20% income tax rate x 1/3 provincial	3.3 %
	20% goods taxable x 6% provincial sales tax	1.2 %
		4.5 %
Wages	20% income tax rate x 1/3 provincial	6.6 %

Table 9
Direct Provincial Government Tax Revenues

(from operational expenditures in the horse industry)

Item	Expenditures	Effective tax rate	Tax
Feed	$ 66.9 m	3.3 %	$ 2.2 m
Tack/misc	$ 10.7 m	7.4 %	$ .8 m
Equip maint	$ 44.1 m	7.9 %	$ 3.5 m
Vet/farrier	$ 25.1 m	7.4 %	$ 1.9 m
Travel	$ 44.3 m	4.5 %	$ 2.0 m
Wages	$ 44.6 m	6.6 %	$ 2.9 m
		Horse owners	$ 13.3 m
Pari-mutuel Tax	$ 200.0 m	3.0 %	$ 6.0 m
Track staff	$ 6.9 m	6.6 %	$ .5 m
		Race track operations	$ 6.5 m
		Total	**$ 19.8 m**

IV. Jobs

Employment has been one of the poorest understood aspects of the horse industry. Respondents indicated that on-farm employment to maintain and train horses is substantial. The survey indicates that the highest concentration of employment is on race and sport horse farms and at horse boarding stables. Furthermore racing farms and stables and sport horse stables are more likely to hire help on a full time basis. Sport horse farms and recreational horse owners more typically hire part time help.

The unemployment insurance program's definition of full time employment was used for determining full time equivalent (FTE) employment. The information on hired help for maintenance, training and support survices outlined in Tables 10, 11 and 12 is summarized in Table 13.

Table 10
Hired Help Related to Maintaining Horses

Private Acreages

	Properties hiring help (Properties % hiring help)	FTE Jobs/Property	FTE Jobs
Race	1280 x 29% = 371	1.1	408
Sport	1727 x 18% = 311	.85	264
Recreation	5335 x 10% = 534	.59	315
Work	3175 x 10% = 318	.06	19
		Total	**1,006**

Boarding Stables

	Stables	FTE Jobs/Stable	FTE Jobs
Race	180	1.0	180
Sport	372	1.2	446
		Total	626
	Total hired help (FTE jobs) for maintaining horses		**1,632**

Table 11
Hired Help Related to Training Horses/Riders

Race horse sector	
* licensed personnel	2428
(- 20% recreational)*	-485
FTE jobs	1943
Sport horse sector	
* 225 trainers obtaining 43% of their income from training	97
* 318 instructors obtaining 43% of their income from instructing	137
FTE jobs	234
Total FTE jobs	**2,177**

Table 12
Employment in Support Services

127 veterinarians x 4 jobs/clinic x 39% of practice =	198 jobs
50 farriers x 1.5 jobs/farrier =	75 jobs
160 feed/tack stores x 9 jobs/store x 35% of business =	504 jobs
Total FTE jobs in support services	**777 jobs**

Table 13
Employment Summary

Maintenance of horses	1,632
Training of horses and riders	2,177
Track operations	415**
Support services	777
Total	**5,001**

* reduction to consider the number of licensed personnel that have other jobs and work at the track as a hobby.

** from appendix on economic impact of horse racing

V. Horse Farm Properties

Farms involved in more traditional forms of agriculture normally file farm income tax returns and are thus considered in Statistics Canada's Census of Agriculture. This is not the case with horses, where often horse owners do not file farm income tax returns. The estimate of horse farm properties considers the properties assessed farm that do not file farm income tax returns.

There are over 11,000 properties in B.C. that keep horses. Farms reporting horses were the only type of livestock farm that increased in number over the last census period.

Horse operations have become very common in areas surrounding urban centres. They are a popular use of the small land holdings in these areas. The following chart compares the number of horse operations with other types of livestock farms in Langley and the Saanich Peninsula.

	Saanich Peninsula	Langley
horse farms	*511	*971
cattle	337	620
hens/chickens	382	378
pigs	80	84
sheep/lambs	219	156
others	346	145

Statistics from the 1986 Census of Agriculture.

*Horse farms estimated from the 1990 Horse Industry Survey.

Tables 14, 15 & 16 outline the size and tax situation of horse farms in the various sectors.

Table 14

Median Property Size

Race	9.5 acres
Sport	8.6 acres
Recreation	6.0 acres
Work	22.5 acres

Table 15
Total Land Used for Breeding and Maintaining Horses

Sector	Households (% with acreage)	Horse properties	Av. size	Total land
Race	1,956 (65 %)	1,280	25 ac.	32,000 ac.
Sport	2,334 (74 %)	1,727	40 ac.	69,080 ac.
Recreation	7,114 (75 %)	5,335	35.5 ac.	189,392 ac.
Work	3,175 (100%)	3,175	22.5 ac.*	71,438 ac.
	14,679	**11,517**		**361,910 ac.**

* Note: The median acreage used for `ranch' horses was used as some large ranches skewed the `average' figure.

The type of horse activity, breeding, racing, maintaining that qualifies for consideration as a farming activity differs under federal income tax law and provincial land assessment law and frequently is the cause of confusion among horse owners and government agents charged with enforcing the rules. The following table indicates how respondents to the survey are considered:

Table 16
Tax Status of Properties with Horses

	% Respondents that filed farm income tax statements	% Respondents assessed farm
Race	75 %	98 %
Sport	49 %	58 %
Recreation	31 %	45 %
Work	94 %	88 %

On a weighted basis it is estimated that 54% of horse properties are assessed farm and 42% of horse owners file farm income tax returns.

VI. Limitations to Industry Growth

One goal of the survey was to identify the key factors limiting growth in the horse industry. The responses can be summarized in two words: facilities and access.

Geography and climate provide natural barriers to progress for all sectors. Horse people, regardless of region, breed, or sector differences remarked on the great distances to competitions and the associated costs. Lack of educational programs for horse people around the province was another universal lament. Winter in many regions of the province shuts down horse activities, especially in smaller regions "that don't have the horse population to support well managed equestrian centers."

The race horse sector identified the well documented need for a new one mile race track in the Greater Vancouver region. They pointed to the rising costs of feed and maintenance of horses in relation to the total purses available. The bottom line for many Standardbred and Thoroughbred owners and breeders is that purses and yearling sale prices are not keeping pace with increased costs of production. Lack of promotion for the race horse industry inhibits attracting new people to the industry. Lack of a unified voice prevents the industry from working together for long term growth and development.

The sport horse owners, especially those in more remote areas of the province, identified the need for good year round training and show facilities. The availability of quality instructors and trainers, coupled with the lack of opportunities for B.C. equine athletes and their riders, were listed as key problems. Absence of marketing and promotion were also mentioned as factors in preventing the growth of the sport horse sector.

The recreational riders related the need for access to good riding and driving trails, and better warning signs for horses on roadways. In areas of rapid urban and industrial growth, access to trails is being cut by subdivisions and increased road traffic. "All our trails have been taken within the last few years for housing developments." Remaining trails are not being viewed or managed as a shared resource. Areas that in the past were the domain of horse and rider are now being used by hikers and bikers sometimes to the exclusion of horses. Damage to existing trails by logging activities and four wheel drive vehicles is another related problem. "We need more input from horse groups to settle user conflicts and establish guidelines for all user groups." Provincial parks do not provide trails or facilities to vacation with horses.

Guide outfitters mentioned the importance of maintaining trails and access to crown lands for both feed and places to ride. Like the recreational riders, they emphasized the need for balanced resource management for the long term benefit of all users.

Urbanization in B.C. is viewed both as an opportunity and a threat to the horse industry. As one person wrote "the right to keep horses must be protected." At the same time, marketing to the public provides potential new customers for racing and equestrian sport events.

Horse people in B.C. feel that lack of unity in the industry prevents them from from speaking as one voice. The horse world is "fragmented and doesn't use its $ spending power to gain respect from any level of government." "There needs to be education and promotion of all disciplines stressing their similar needs." "A general problem is the continuing difficulty the horse business has in being taken seriously as a growing, contributing industry...."

Communicating the need for improved horse facilities and access to all levels of government and the private sector is the key factor limiting growth of the industry in the province.

VII. Area/Sector Profiles

The survey responses were coded by their forward sorting area and by the sector the horse owner was involved in. As a result the responses from different geographic areas and different sectors can be analyzed. For example all responses from sport horse owners in Kelowna could be analyzed.

An example of an area profile completed for Langley and a sector profile for rodeo are included.

Though this information is most interesting it should be understood that as the survey is broken down and correspondingly fewer responses are used in the analysis, the accuracy of the estimations is lower.

Appendix

(1) Methodology

(2) Estimate of Recreational Horses

(3) Sport Horse Training and Instructing Wages

(4) Economic Impact of Horse Racing in B.C. (an update)

(5) Support Services

(1) Methodology

The information presented in this report and held on file at the Ministry of Agriculture, Fisheries & Food was obtained from responses to a survey mailed to over 10,000 households in B.C. The survey was mailed, with a self addressed envelope, to all people that were members of some horse organization. The mailing list included:

- All members of the Horse Council of B.C.
- Members of horse breed associations
- All members of the Horseman's Benevolent and ProtectionAssociation (H.B.P.A. - all people racing thoroughbred horses in B.C. must be members.)
- Guide Outfitters of B.C.
- B.C. Rodeo Association
- Riding clubs in B.C.
- 4-H horse club members through their leaders
- The Backcountry Horsemen of B.C.
- Members of the B.C. Cattlemen's Association

Surveys were also available for pick-up at tack shops in the province.

A survey of horse support services was sent to:

- All equine veterinarians
- All B.C. members of the Western Canadian Farriers Assn.
- Tack shops in the yellow pages
- Feed stores in the yellow pages
- Horse businesses that advertise in industry journals

Responses were identified by forward sorting area (FSA), the first three digits of the postal code, and by industry sector. For the purpose of this survey four sectors were identified; race, sport, recreation and work. The sport sector was defined as owners that compete for prize money at least three times per year. This means that 4-H groups and many pony club members would come under the recreational sector.

It is impossible to determine exactly how many households were reached as there was some duplication in the mailing lists. 1600 were returned which, based on reaching 10,000 households (12,000 surveys were mailed out), is a 16% return rate.

Comparison to Other Horse Studies

Many studies have been done on the size and economic impact of the horse industry. Results have differed widely. The key problem with many other studies is that one sector of the industry was sampled then used to make assumptions about the total industry. This survey overcame that problem by sampling the different sectors individually then combining them to make up the whole industry.

Though the size and economic impact estimates from other studies were not helpful, the survey information on operating expenditures, scattered throughout these studies, was a good base to compare our results. The expenditure estimates in this study were similar to other studies.

Study	Estimate of Annual Operating Expenditures (per horse)
Total Industry	
Equine Data Systems(1985)	$ 2,966
Woods Gordon (1986)	$ 2,698
B.C. Ministry of Agriculture and Fisheries (1990)	$ 3,100
Specific Sectors	
A.Q.H.A. (1988 membership) sport	$ 4,386
Killingsworth (1990) race	$ 5,030

The Woods Gordon study, 1986, titled 'The Economic Impact of The Horse Industry in Canada' has been widely quoted. Woods Gordon found the number of horses, the economic contribution and the employment in the industry to be much higher than this report.

There are three main reasons for this:

- Woods Gordon estimated there were .81 farm based employees per census horse farm. Respondents to our survey indicated they hired .18 FTE per census horse farm.

- Woods Gordon assumed the horse population was split 48% pure bred and 52% grade. Respondents to our survey indicated this ratio was 75% pure breds to 25% grade. The response to our survey indicates Woods Gordon overestimated the horse population by 35%.

- responses to our survey indicated there were approximately 2,600 full time jobs at racing and training facilities. Woods Gordon estimated there were 40,000 jobs at facilities across Canada; 4,800 (12% of industry) in B.C.

Wood Gordon did not outline how these estimates were developed.

Validity of the Study

Estimations of the size and economic contribution of the industry are based on two key variables: the number of horses in the province and the expenses related to the average horse.

Information on the expenses related to maintaining a horse is readily available. The actual number of horses is difficult to estimate.

This study began the task of estimating the number of horses by dividing them into four different sectors by activity: race, sport, recreation and work. The total population in the race and sport sectors was sampled and the response rate of 16% provided a very accurate estimate of the number of horses. The ratio of census vs. non-census horse farms was used to estimate the number of recreational horses (see the appendix for more detail). The total population of work horses owners was sampled, however, the low response rate provides less confidence in the results and prevents some further analysis of the data.

Response Rates by Sector

		Sector Size	Responses	% of Sector
Race		2,000	326	16 %
Sport		2,300	411	18 %
Recreation		7,000	737	10 %
Work	- Ranch	3,000	30	1 %
	- Guide/pack		36	
	- Draft		13	
	- Others		98	

Other Checks

The estimate of the number of census farms with horses (households filing farm income tax returns) in the areas around the major urban centers was very close to the actual 1986 census data. For example the area profile of Langley estimated there were 511 census farms while the actual 1986 census data (+ 5% increase over the 4 years) estimates the number at 452.

In 1989 the Backcountry Horsemen did a physical inventory of the horses in Surrey Municipality to support a submission to Council. They counted 2900 horses. This report estimates 3,000 horses in Surrey.

The annual expenditure estimates of the survey are consistent with other studies.

Response Error in Area Profiles

Area profiles are subject to two potential response errors; people living in one area mailing their response from another area and people living in one area boarding their horse in another area. These errors will be most common in areas around the urban centers.

The methodology behind the survey was to identify horse owners rather than horses. As a result profiles of areas with a high number of boarding stables will tend to have underestimated the horse population.

Some horse owners in areas around urban centers mailed their surveys from their office rather than their home. Many of these were caught by identifying the return address.

Unfortunately these response errors prevent doing specific profiles of Vancouver or the surrounding municipalities (Burnaby, Richmond, North Shore, Delta). The response errors are minimized when grouping these into a Greater Vancouver profile.

Further Details

A more detailed analysis of the statistical validity of the survey is available on request from the Ministry's Horse Industry Program.

(2) Estimate of Recreational Horses

Unlike the race and sport sector, there is no easy means of determining how large the recreation group is. The number of recreational horses was estimated by first estimating how many census farms reporting horses were recreationally based. This was determined by taking the difference between Statistics Canada's reported number of census farms reporting horses and the farms we knew or estimated were involved in racing, sport or work.

Sector	Estimated census farms		
Race	(151 farms reporting x 6)	=	906
Sport	(140 farms reporting x 6)	=	840
Work	(est. from census info*)	=	3175
Recreational	(the difference)	=	1654
	Total census farms reporting horses (1986 + 5%)		6575

Only 23.25 % of households owning recreational horses reported that they were census farms. Consequently we estimate that there are 1654/.2325 or 7114 households in the province that own recreational horses. On average each household owns 4.9 horses so we estimate that there are 7114 x 4.9 or 34,858 recreational horses in the province.

* Surveys were sent to the 3,500 members of the B.C. Cattlemen's Association. All members do not operate ranches. To estimate the number of farms with working horses we compared the number of cattlemen with the following estimate of the number of farms that would likely utilize work horses:

Region	# Census Farms	Estimate with Working Horses	
Total		%	#
Cariboo	760	90%	684
Island	1120	10%	112
Kootney	482	75%	361
Mainland	2865	5%	143
Okanagan	1626	30%	243
Omineca	953	90%	857
Peace	865	90%	775
	Estimated total census farms with working horses		3175

This estimate is consistent with the number of cattlemen in the province so was used for our estimates.

(3) Sport Horse
Training & Instruction Wages

Instructors

300 instructors x 19 students x $ 100/mo	=	$ 6.84 m/yr

Trainers

200 trainers x 6.8 horses x $ 175/mo	=	$ 2.86 m/yr
Total		**$ 9.7 m/yr**

* Estimation of the number of instructors and trainers and number of students and horses they handle is based on survey responses.

* The average cost per month was estimated from discussions with trainers and instructors.

(4) Economic Impact of Horse Racing in B.C.

(Update)

The racing sector of the horse industry is very well defined and regulated. This provides us with the ability to estimate the economic activity of the industry easily and relatively accurately.

The racing industry is driven by two sources of funds: pari-mutuel wagering and horse owners' expenditures. These funds are spent within the confines of the race tracks or on breeding and training farms.

This study looks at the employment and expenditures that result directly from owners' expenditures, patron's non-wagering expenditures and the portion of the pari-mutuel handle not returned to the patrons. The money redirected from the government's tax for breeders and owners' awards is not considered as it simply off-sets the need for owners to use other sources of funds to support their horses.

Most of the information used comes from the racing commission, breed associations and the recent horse industry survey. The following assumptions were used:

- 1/3 of Thoroughbred race horses are owner trained.
- 2/5 of Standardbreds are owner trained.
- 10% of licensed clerks and concession workers were on call
- the activity at the interior circuit and Sandown TB is estimated to be 7% of the major meets; consistent with their proportion of the handle.
- the average training fees at Exhibition Park are $1000 per horse per month and the average training fees at Cloverdale/Sandown are $800 per horse per month
- the number of full time equivalent (FTE) employees on the farm is .04 per horse.
- the weighted income tax rate for wages earned in the industry is 15%. This reflects a portion of wages that go unreported.

Secondary expenditures, resulting from the direct expenditures, are typically estimated by a multiplier. Other studies of the racing industry have used multipliers ranging from 1 to 2. This study uses 1, in part because it makes this study more comparable with the Killingsworth study done in Washington State.

Results

Table A-1

Summary of the Economic Contribution of the Race Horse Industry

(in $ millions)

	Taxes	Wages	Expenditures	Total
Government (B.C.)	$ 7.4			$ 7.4
Track		$ 6.9	$ 9.0	$ 15.9
Owners (through) Horsemen		$18.4	$ 7.3	$ 25.7
Breeders		$ 5.9	$ 26.6	$ 32.5
Total	**$ 7.4**	**$31.2**	**$ 42.9**	**$ 81.5**

Total direct expenditures of $ 81.5 million lead to a further $ 81.5 million in secondary expenditures making the racing industry's contribution to the B.C. economy approximately $161 million.

When making policy decisions that will affect the industry or are designed to assist the industry, it is important to understand the differences between the sectors.

In general terms the bulk of the employment is in training horses and the bulk of expenditures is in maintaining breeding stock on farms. The breeding industry accounts for 40% of the wages and expenditures and along with on-farm training means that over half the industry is farm based. Only 20% of wages and expenditures come from servicing the patron base at the race track.

As a rule of thumb, every $1 in pari-mutuel handled stimulates $.80 in economic activity and $.07 in direct government revenues

The following charts provide more detail of the jobs and economic activity in the different areas of the industry.

Horsemen

(Horses in training)

1. Expenditures and jobs related to care and training

(a) Horsemen at Exhibition Park	
* Owner expenses during training	
- 616 owner trained @ $500/mo x 9 mo	$ 2,772,000
-1000 hired trainer @ $1000/mo x 9 mo	$ 9,000,000
* Owner expenses during lay-up	
- 1616 x $ 300/mo x 3 mo	$ 1,454,400
Total cost	$ 13,226,400
- Cost of goods (feed,bedding, etc.) $200/mo x 1616 x 12 mo	$ 3,878,400
- Wages (the difference)	$ 9,348,000
* Licensed trainers, grooms, exercise boys	1387
(b) Horsemen at Cloverdale/Sandown	
* Owner expenses during training	
- 500 owner trained x $400/mo x 12 mo	$2,400,000
- 300 hired trainer x $800/mo x 12 mo	$ 2,880,000
Total cost	$ 5,280,000
- Cost of goods(feed,bedding etc.) $175/mo x 800 x 12	$ 1,680,000
- Wages (the difference)	$ 3,600,000
* Licensed horsemen	542
(c) Horsemen at other small tracks (add 10%)	
Licensed horsemen	193
Cost of goods (.10 x $ 5,558,400)	$ 555,840
Wages (.10 x $ 12,948,000)	$1,294,800

Summary

Licensed horsemen	2122
Expenditures	
Goods	$ 6,114,240
Wages	$14,242,800

2. Jockeys/Drivers and Agents

Exhibition Park	$ 954,000
Cloverdale (5% of purses)	$ 257,847
Other tracks (7%)	$ 67,000

Summary

Total wages	$ 1,278,847
Total licenses	226

3. Veterinarians and Farriers

(a) Veterinarian fees:

Ex. Park	
-1616 horses @ $3.25/day x 250 days	$ 1,313,000
Cloverdale/Sandown	
- 800 horses @ $2.50/day x 300 days	$ 600,000
Other tracks (+10 %)	$ 191,300
Total	$ 2,104,300

(b) Farrier fees:

Ex. Park	
-1616 horses x $3.00/day x 250 days	$ 1,212,000
Cloverdale/Sandown	
- 800 horses x $2.50/day x 300 days	$ 600,000
Other tracks (+ 10%)	$ 181,000
Total	$ 1,993,000

(c) Wages and expenditures

Veterinarian fees ($ 2,104,300)	
Expenditures (40%)	- $ 842,000
Wages (60%)	- $ 1,262,300
Farrier fees ($1,993,000)	
Expenditures (20%)	- $ 389,600
Wages (80%)	- $ 1,603,400
* Licenses granted =	80

Summary

Total licenses	80
Expenditures	
Wages	$ 2,865,700
Goods	$ 1,231,600

Summary

(Horses in training)

Licensed personnel	2428
Expenditures	
on wages	$ 18,386,547
on goods	$ 7,345,840

Breeders

(Horses not in training)

Expenditures on goods and services

9,842 horses x 12 months x $ 225/mo =	$ 26,573,400

Employment

Jobs

9,842 horses x .04 jobs/horse =	394 FTE jobs

Wages

394 jobs x $ 15,000/year =	$ 5,890,000

Summary

FTE jobs	394
Expenditures	
Wages	$ 5.9 m
Goods & Services	$ 26.6 m

Track Operations

Wages & Jobs

1. Mutuel Clerks

Exhibition Park

350 clerks x 124 days = 43,400 clerk days

43,400 clerk/days @ $60/day — $ 2,604,000

Cloverdale

125 clerks x 125 days = 15,625 clerk days

15,625 clerk days @ $ 60/day — $ 937,500

Sandown

50 clerks x 52 days = 2,600 clerk days

2,600 clerk days @ $60 — $ 156,000

Interior tracks & Sandown TB

add 7% — $ 250,000

Total wages — $ 3,947,500

FTE jobs — 263

2. Concessions

Exhibition Park 120 x 125 days

Cloverdale 30 x 125 days

Sandown 20 x 52 days

Interior & Sandown (TB) + 7%

21175 person days @ $50 — $ 1,058,000

FTE jobs — 85

3. Administration and Facilities Management

Exhibition Park

40 employees @ $ 30,000/yr — $ 1,200,000

Cloverdale & Sandown

25 employees @ $ 30,000/yr — $ 750,000

Total wages — $ 1,950,000

FTE jobs — 65

Summary

Total FTE jobs — 415

Total wages — $ 6,955,500

Other Expenditures

Expenditures by the track on goods and services is estimated using results done on the racing industry in New York, Ontario and Washington State.

These expenditures are estimated at $ 9 million annually.

Government Revenues

The provincial government receives 3% of the handle in tax revenues from racing. This amounts to $ 6 million annually.

The provincial and federal governments receive income tax from wages. To estimate the tax collected it is assumed the average income tax rate of 15% exists in the industry. This takes into consideration that a proportion of the wages paid are not reported. Therefore it is estimated that .15 x $ 25.3 million or $ 3.8 million is collected in income tax which is split 1/3 to the province ($1.3 m) and 2/3 to the federal government ($2.5 m).

The provincial government also receives sales tax on liquor sales.The average customer consumes $1 in alcoholic beverages. This would amount to tax revenues of $.06/customer x 1.28 million customers or $ 77,000 annually.

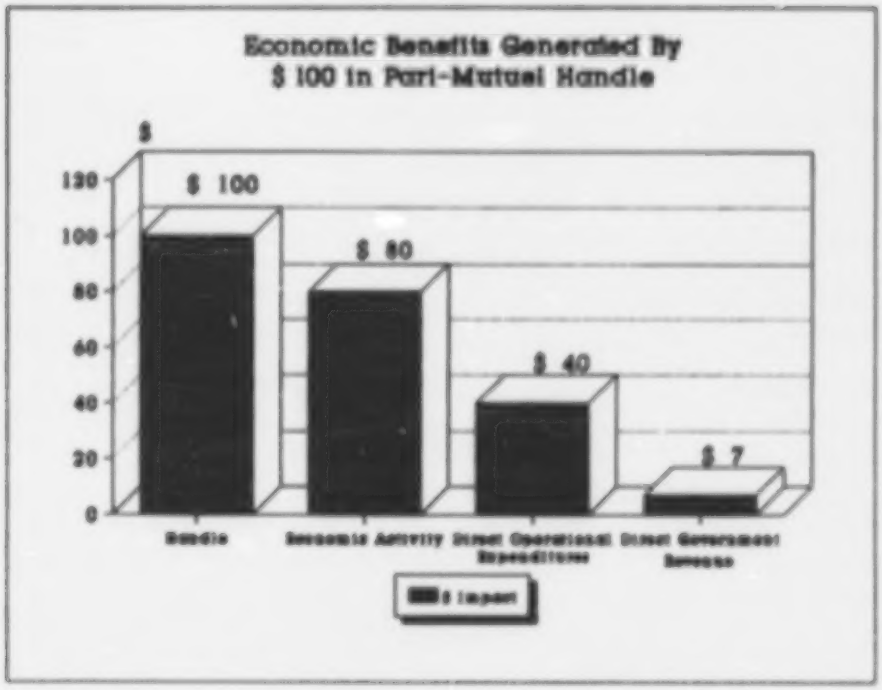
The federal government now collects GST on all sales to patrons. Non-wagering expenditures by patrons are estimated at $13/patron/day, which would generate $.90 x 1.28 patron/days or $ 1.15 million dollars in GST.

All people in the racing industry should be 'in business' and as such should pay no GST and little PST. Though this may not be the case, it is impossible to estimate how much is paid and it is inappropriate to include it if it is paid unnecessarily.

Summary

Government Revenues

	Provincial	Federal
Pari-mutuel tax	$ 6.0	
Income tax	$ 1.3	$ 2.5
GST (patron expenditures)		$ 1.1
PST (patron liquor sales)	$0.078	
Total	$ 7.4 m	$ 3.6 m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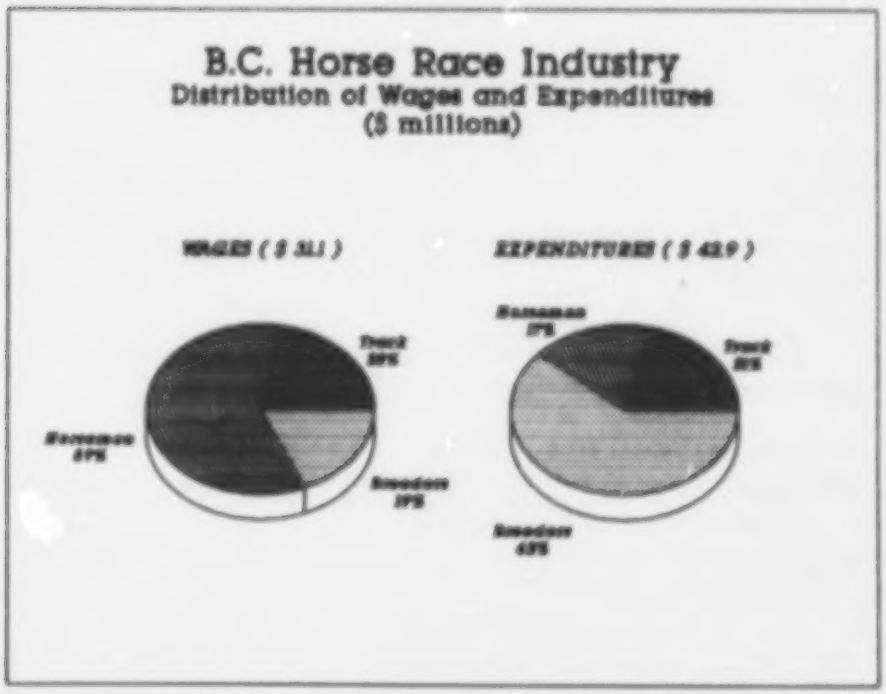
B.C. Horse Race Industry
Distribution of Wages and Expenditures
($ millions)

(5) Support Services

The three major support services for horses - veterinarians, farriers and feed/tack stores - were surveyed separately. Their employment and economic contribution are estimated as follows:

Veterinarians	Jobs	Sales
127 vets indicate they do some equine work		
* 127 clinics @ 4 jobs / clinic x 39% of the practice equine =	198 jobs	
* 127 clinics @ $ 405,000/year x 39% of the practice equine =		$ 20.1 m

Farriers	Jobs	Sales
50 farriers are members of the Western Farriers Association		
* 50 farriers @ 1.5 jobs =	75 jobs	
* 50 farriers @ $ 102,000/year		$ 5.1 m

Feed/Tack*	Jobs	Sales
* 160 stores @ 9 jobs/store x 35% of business equine =	504 jobs	
* feed sales - 70 stores @ $ 2.3 m/yr. x 31% of business equine =		$ 49.9 m
* tack sales - 90 stores @ $ .3 m/yr. x 50% of business equine =		$ 13.5 m

* Note: only direct retail sales by the large feed mills (Buckerfields, East Chilliwack and Otter) were considered. Wholesale sales are picked up in the small feed stores.

Comparison of estimates of business sales and industry purchases

The estimates of the sales of goods and services to industry and their estimates of expenditures should be similar. The following table compares them:

Table A-2
Support Services

Item	Est. of Expenditures By Horse Owners	Est. of Sales Support Services
Feed	$ 50.6 m	$ 49.9 m
Tack	$ 12.1 m	$ 13.5 m
Veterinarian	$ 14.2 m	$ 20.1 m
Farrier	$ 17.6 m	$ 5.1 m

The similarity in the estimates of feed and tack sales and expenditures is a pleasant surprise but should not be taken in any way as a reflection of the accuracy of the estimates. It merely indicates that the survey is a good estimate of the actual expenditures.

The difference in the estimated sales by farriers and the estimated expenditures on shoeing by owners relates to the large number of 'hobby' or part time farriers. The support services questionnaire was sent to members of the Western Farriers Association. This association estimates it represents only 10% - 15% of the farriers in the province. Their membership, however, does represent most of the full time farriers.